

REMARKS

In the Final Office Action dated February 1, 2010:

- Claim 9 was rejected under 35 USC § 103(a) as obvious over Yajima '048 (machine translation of JP 11230048) in view of Kawata (U.S. Pat. No. 6,932,353);
- Claims 5 and 10-12 were rejected under 35 USC § 103(a) as obvious over Yajima '048 in view of Kawata and further in view of Sutter (US 2002/0157815);
- Claims 6 and 7 were rejected under 35 USC § 103(a) as obvious over Yajima in view of Kawata and Sutter and further in view of Kawano (U.S. Pat. No. 6,258,167); and
- Claim 8 was rejected under 35 USC § 103(a) as obvious over Yajima in view of Kawata, Sutter, and Kawano and further in view of Fedulov (J. Mining Sci., 15:54-65, 1979).

Claims 5-12 are pending, claims 1-4 having been canceled by the amendment filed December 22, 2009.

Applicant respectfully traverses the present rejections, for the reasons set forth below.

Claim 9 was rejected under 35 USC § 103(a) as obvious over Yajima '048 (machine translation of JP 11230048) in view of Kawata (U.S. Pat. No. 6,932,353). The rejection is improper because the combination of references fails to teach or suggest each and every recitation of claim 9.

In particular, the Examiner asserted that Yajima (par. 14 and Fig. 1) teaches a nozzle assembly, in which a pump, a nozzle body, a primary-side valve, and a secondary-side valve are provided, as recited by claim 9. Applicant respectfully disagrees.

Applicant respectfully submits, herewith, an accurate translation of Yajima's relevant paragraphs 10, 13, 14, and 17. These relevant portions of Yajima do not disclose, teach, or even suggest that a nozzle body and a pump might be provided in a nozzle assembly, as recited by claim 9 and as shown in Applicant's Figure 1.

Instead, Yajima's Figure 1 clearly shows a pump 10 with an inflow joint portion 12 and an outflow joint portion 13. Yajima further shows a supply-side flow path 14 connected to the inflow joint portion of the pump and including a supply-side valve 18, which is disposed away from the pump. Yajima also shows an outflow-side flow path 16 leading from the outflow joint portion of the pump to an application nozzle 17, which is disposed away from the pump. Yajima's outflow-side flow path includes an outflow-side valve 19, which is disposed away from the pump. Thus, rather than teaching a nozzle assembly in which a pump, a nozzle body, a primary-side valve, and a secondary-side valve are provided, as recited by claim 9 and as shown in Figure 1 of the present application, Yajima teaches separate and dispersed components.

Should the Examiner have any questions regarding Applicant's understanding of Yajima, the Examiner is respectfully invited to contact Applicant's Representatives at the below telephone number.

The Examiner has not explained how Kawata might supply the above-identified deficiencies of Yajima with reference to claim 9, and Applicant does not find any relevant teaching in Kawata. For at least this reason, Applicant respectfully submits that even the combination of Yajima with Kawata still fails to render claim 9 obvious. Therefore, the obviousness rejection of claim 9 is improper under 35 USC § 103(a), and should be withdrawn.

Additionally, claims 5-8 and 10-12 all depend from claim 9. As the Examiner has not indicated how Sutter or Kawano might remedy the above-identified deficiencies of Yajima and Kawata, Applicant respectfully submits that

the obviousness rejections of claims 5-8 and 10-12 also are improper under 35 USC § 103(a), and should be withdrawn.

With further reference to the recitations of claim 9, the Examiner acknowledged that Yajima does not teach a double tube including an internal tube containing a primary-side chemical liquid flow path, and an external tube in which the internal tube is disposed and in which temperature control water flows, as further recited by claim 9. However, the Examiner asserted that Kawata teaches the double tube recited by claim 9. Applicant respectfully disagrees.

In particular, the Examiner asserted, “KAWATA discloses a chemical-dispensing apparatus having a heat exchanger (10, 11) consisting of an inner tube (pipe 9) through which the chemical (5) flows, and an outer tube (10, 11) through which temperature-regulated water (7) flows ... KAWATA teaches that the heat exchangers (10, 11) are located around the inner tube (9) along the entire transport path of the chemical from source to nozzle”. (Final Office Action p. 3-4, emphasis added). However, Kawata does not explain how a heat exchanger might be incorporated into a pump, as specifically recited by claim 9. In particular, Kawata does not teach or suggest “a temperature control water flow path formed in the pump”.

The Examiner asserted that incorporating Kawata into Yajima would result in an apparatus in which Yajima’s flexible tube 21 is disposed within a double tube. However, neither Yajima, nor Kawata, nor the Examiner has explained how Yajima’s flexible tube still could function as a pump, if it were disposed within Kawata’s tube containing temperature-regulated water. Lacking such explanation, teaching, or suggestion in the cited prior art, Applicant respectfully submits that the Examiner’s proposed combination predictably would render Yajima’s pump inoperable for its intended purpose, and, therefore, is an improper combination under 35 USC § 103(a).

Additionally, Kawata does not define what is the “source” of Kawata’s chemical. Thus, Kawata does not define where the “entire transport path”

begins. Therefore, to one of ordinary skill in the art at the time of the claimed invention, Kawata might, at most, have taught a pump as the source of Kawata's chemical, and heat exchangers 10, 11 extending along the transport path from said pump to Kawata's nozzle.

For at least these additional reasons, Kawata fails to teach or suggest modifying Yajima to meet the recitations of claim 9. Should the Examiner have any questions in this regard, the Examiner is respectfully invited to contact Applicant's Representatives by telephone.

Moreover, rather than a double tube as recited by claim 9, Kawata teaches a triple tube. In Kawata's main heat exchanger 10, Kawata's chemical pipe 9 is coiled around an inner tube 10a within an outer tube 10b. In Kawata's auxiliary heat exchanger 11, the pipe 9 again extends between an inner tube 11a and an outer tube 11b. Thus, Kawata fails to teach or suggest the double tube arrangement recited by claim 9.

For at least the reasons discussed above, even the improper combination of Yajima, Kawata, Kawano, and Sutter still would fail to render obvious claim 9, or any of dependent claims 5-8 and 10-12.

Applicant has shown that claims 5-12 are clearly distinguishable from the cited prior art, and therefore requests that the obviousness rejections of claims 5-12 be withdrawn. However, if the Examiner believes any issues remain outstanding to prevent allowance of the claims presented herein, Applicant respectfully requests that the Examiner contact Applicant's Representatives by telephone so as to expedite resolution of such issues.

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Response to Final Office Action dated: April 1, 2010

Applicant believes no fees are due in connection with this Amendment and Response. If any fees are deemed necessary, Applicant's Attorneys hereby authorize the Commissioner to deduct such fees from our Deposit Account 13-0235.

Respectfully submitted,

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